

Claims

[c1] What is claimed is:

1. A n engine comprising:

a block having at least one cylinder formed therein;

an oil injector connected to the engine to provide lubricating oil to the at least one cylinder;

an oil supply in fluid communication with the oil injector;

and

an ECU programmed to control an amount of oil introduced into the engine, wherein a first amount of oil is introduced into the engine based on a normal operation and a second amount of oil, greater than the first amount of oil, is introduced into the engine based on a storage preparation operation.

[c2] 2. T e engine of claim 1 further comprising an oil pump controlled by the ECU and fluidly connected to the oil supply and the oil injector.

[c3] 3. T e engine of claim 1 wherein the ECU is further programmed to receive an indication of a neutral position and an indication of an engine idle speed and upon receiving both indicia for at least a predetermined time period, the ECU initiates the storage preparation operation.

- [c4] 4. The engine of claim 1 wherein the ECU is programmed to provide an indication of the storage preparation operation.
- [c5] 5. The engine of claim 4 wherein the indication is via a plurality of lights and wherein the ECU is programmed to indicate that the storage preparation operation has commenced.
- [c6] 6. The engine of claim 4 wherein the plurality of lights are toggled on and off to indicate an elapsed time of throttle position.
- [c7] 7. The engine of claim 1 wherein the storage preparation operation is performed while the engine is running and wherein the ECU is programmed to shut off the engine after completion of the storage preparation operation.
- [c8] 8. The engine of claim 1 wherein the engine is a two-cycle engine and is incorporated into at least one of an outboard motor, a watercraft, a snowmobile, an ATV, a motorcycle, a scooter, and lawn/garden equipment.
- [c9] 9. The engine of claim 1 wherein the ECU is further programmed to disregard a throttle position signal above a predetermined value upon commencing the storage

preparation operation.

[c10] 10. The engine of claim 9 wherein the predetermined value is indicative of at least a six percent open throttle plate.

[c11] 11. The engine of claim 1 wherein the ECU is programmed to receive a throttle position sensor signal and a transmission position signal and if the throttle position sensor signal is greater than a predetermined value and the transmission position signal is indicative of a neutral position for a predetermined time, the ECU is programmed to provide a storage preparation operation initialization indication.

[c12] 12. The engine of claim 11 wherein the predetermined value of the throttle position sensor is at least one volt and the predetermined time is at least five seconds.

[c13] 13. The engine of claim 11 wherein multiple changes in the throttle position, each for the predetermined time, cause the ECU to generate the storage preparation operation initialization indication.

[c14] 14. An outboard motor comprising:
an engine;
a midsection extending from the engine;
a gearcase attached to the midsection and having a pro-

propeller shaft extending therefrom, the propeller shaft constructed to be driven by the engine; and
an ECU programmed to initiate an oil delivery to the engine during engine operation and programmed to receive a storage signal, the ECU, in response to the storage signal, is further programmed to initiate an auto-fogging procedure.

[c15] 15. The outboard motor of claim 14 further comprising an oil pump controlled by the ECU and constructed to deliver (1) an amount of oil to the engine from a reservoir during normal operation, and (2) a larger amount of oil to the engine in response to the storage signal.

[c16] 16. The outboard motor of claim 15 wherein the ECU monitors a throttle position and a transmission position.

[c17] 17. The outboard motor of claim 16 wherein the ECU is further programmed to provide an indication that the throttle position is idle and the transmission is in neutral for a predetermined period.

[c18] 18. The outboard motor of claim 17 wherein if the throttle position is increased after the indication and the transmission is in neutral for a predetermined time, the ECU is further programmed to provide a second indication.

- [c19] 19.The outboard motor of claim 18 wherein if after the second indication is provided, the throttle position is reduced, and the transmission is in neutral for a predetermined time, the ECU commences the auto-fogging procedure.
- [c20] 20.The outboard motor of claim 14 wherein the storage signal is at least one of initiated by, monitored by, and controlled by a diagnostic tool external to the outboard motor.
- [c21] 21.The outboard motor of claim 14 wherein the ECU is programmed to perform the auto-fogging procedure while the engine is running and to automatically shut off the engine after the auto-fogging procedure is complete, wherein the engine is deemed ready for storage.
- [c22] 22.The outboard motor of claim 14 wherein the ECU is further programmed to provide an indication of initialization of the auto-fogging procedure.
- [c23] 23.The outboard motor of claim 22 wherein the indication is one of an acoustical indicator and a visible indicator.
- [c24] 24.The outboard motor of claim 23 wherein the visible indicator includes systematically lighting at least one of

an engine temperature light, a fuel indicator light, and a battery condition light.

- [c25] 25. A method of preparing an engine for storage comprising the steps of:
providing an ECU with a storage routine;
initializing the storage routine; and
increasing an amount of lubricant introduced into an engine beyond that needed for normal operation during the storage routine.
- [c26] 26. The method of claim 25 wherein the step of initializing the storage routine is at least one of receiving a storage routine initialization signal or generating a storage routine initialization signal.
- [c27] 27. The method of claim 25 further comprising the step of automatically shutting down the engine after completion of the storage routine.
- [c28] 28. The method of claim 25 further comprising indicating acceptance of the storage routine initialization signal.
- [c29] 29. The method of claim 28 wherein indicating acceptance of the initialization signal is communicated through at least one engine condition light.
- [c30] 30. The method of claim 25 wherein the storage routine

initialization signal is derived from at least one of a position of a throttle and automatically initiating the routine when the engine is idling in neutral.

- [c31] 31.The method of claim 25 wherein if the engine is at least one of above idle and engaged with a transmission, the routine initialization signal is disregarded.
- [c32] 32.The method of claim 25 wherein the step of increasing an amount of lubricant into the engine includes automatically adjusting an engine speed to maintain engine operation.
- [c33] 33.The method of claim 25 wherein the step of increasing an amount of lubricant into the engine includes introducing the increased amounts of lubricant directly into a crankcase of an engine.
- [c34] 34.The method of claim 25 wherein the increased amount of lubrication is introduced for a predetermined time.
- [c35] 35.The method of claim 25 wherein the storage routine initialization signal is induced by at least one of an operator and a diagnostic tool.
- [c36] 36.The outboard motor of claim 19 wherein the ECU is further programmed to check for an increase in throttle

position before commencing the auto-fogging procedure.